1987 DOWNTOWN BOSTON PARKING INVENTORY SURVEY

BOSTON TRANSPORTATION DEPARTMENT

Commissioner

Richard A. Dimino

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Raymond L. Flynn
Mayor

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HONORABLE Raymond L. Flynn, Mayor
Boston Massachusetts

July 1988

CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
RAYMOND L. FLYNN

July 1988

Dear Colleague:

The City of Boston is the center of the economy and transportation system for the entire New England region. The economic growth that Boston has experienced in the past decade has resulted in significant benefits to local residents, area businesses and local developers. This growth, however, has also resulted in a tremendous increase in the number of vehicles entering the City on a daily basis.

In the past four years, my Administration has taken significant and unprecedented steps to address the problems associated with increased traffic and limited parking in downtown Boston and its neighborhoods. The effective use of the City's limited parking resources has a direct effect upon the level of congestion on Boston's streets and upon the City's accessibility in general. As part of the City's ongoing effort to develop an effective policy to address present and projected future demands for parking in Boston, the Boston Transportation Department (BTD) recently completed a parking survey of all parking facilities in downtown Boston.

This survey provides the most current and accurate information about the existing parking supply. It will serve as a useful tool in the City's effort to formulate a parking policy that maximizes the use of existing parking resources while increasing the availability of parking at locations peripheral to the downtown area. It will also be very useful to local businesses, developers and city officials in making future growth and land-use decisions in Downtown Boston.

I am pleased to present to you the results of this study and I'm sure you will find this information useful. I look forward to working with you to ensure that the decisions made today will ensure access into and around Boston while enabling the kind of economic growth that will benefit the City and the region in the years to come.

Sincerely,

Ray Flynn

Raymond L. Flynn
Mayor

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EXECUTIVE SUMMARY

1987 DOWNTOWN BOSTON PARKING INVENTORY SURVEY

July 1988

In the fall of 1987, the Boston Transportation Department (BTD) began an in-house effort to conduct a parking survey of all downtown parking facilities. This document has been prepared to provide the general public and interested professionals with the information collected in the parking survey effort. This survey is a vital first step in the Department's formulation of a downtown parking policy, providing the technical information base necessary to analyze existing conditions and recent trends in order to develop a comprehensive parking policy.

It was determined that the survey would be conducted in the Boston Proper area in a manner that was consistent with the boundaries of the Parking Freeze area as the overall public parking supply is reflective of the parking freeze bank. The study area is bounded by Massachusetts Avenue, the Charles River, Boston Harbor, the Fort Point Channel and the Southeast Expressway.

The 1987 BTD Parking Inventory Survey indicates that the total parking supply in the study area contains 55,667 legal off-street parking spaces. Of this total, 32,843 (59%) are open to the general public and 22,824 (41%) are private. In addition, 1,475 public parking spaces have been allocated from the parking freeze bank and are due to open in 1988, increasing the public off-street parking supply to 34,318 spaces (58%). Private spaces to be available in 1988-89 total an additional 1,762 spaces, increasing the private parking supply to 24,586 spaces (42%). A portion of the private parking supply increase is residential. This will bring the total off-street parking supply to 58,904 spaces.

The occupancy rate of the total off-street parking supply is at 86% at 10:00 a.m. and 91% at noon. Of the 32,843 public off-street parking spaces in the study area, 88% are occupied at 10:00 a.m. and 95% at noon. In the private parking supply, of the 22,824 spaces, 84% are occupied at 10:00 a.m. and 85% at noon.

Executive Summary

Parking rate information indicates a wide variation of charges within parking zones. The total average parking rate for one hour was $3.60, three hour was $7.75, eight hour was $10.00, Early Bird rate was $7.20 and the monthly rate was $186.00.

A comparison of the 1987 parking survey information with the 1983 CSI/BTD parking survey shows a 12.8% increase in the total parking supply. The public supply increased by 5.14% and the private supply increased by 26%. With 3,237 parking spaces (1,475 public and 1,762 private) scheduled to open in 1988-89, the percentage increase from 1983 will be 19.4% for the total parking supply, 9.8% for the public parking supply and 35.8% for the private parking supply.

In 1983, the average occupancy rate was 83.6% at 10:00 a.m. and 87.6% at noon. This compares to the 1987 average occupancy rate of 86.3% at 10:00 a.m. and 90.6% at noon which demonstrates decreased availability of parking at these times. Total parking spaces available at noon decreased from 6,086 in 1983 to 5,235 in 1987.

Rates have changed dramatically since 1983 with the average 1 hour rate increasing by 51% and the 8 hour rate increasing by 63%.

The BTD effort to survey the downtown off-street parking facilities produced a considerable amount of data that needs further analysis and evaluation. The survey affords the Department an opportunity to develop a comprehensive parking policy based on parking supply information delineated by usage, location and occupancy. Information pertaining to parking rates in the downtown area offers insight into the elasticity of the parking demand and the significant variability of rates charged. The information generated by the survey will be further analyzed, comparing changes in supply, occupancy and rates. The BTD will also analyze the parking survey information in terms of related land-use and transportation access changes.

Executive Summary Tables

1987 DOWNTOWN BOSTON PARKING INVENTORY SURVEY

1987 Parking Supply

	Total	Public	Private
Existing	55,667	32,843 (59%)	22,824 (41%)
Includes spaces opening in 88-89	58,904	34,318 (58%)	24,586 (42%)

1987 Parking Occupancy

Total		Public		Private	
10:00 a.m.	noon	10:00 a.m.	noon	10:00 a.m.	noon
86%	91%	88%	95%	84%	85%

1987 Average Parking Rates

1 Hour	3 Hour	8 Hour	Early Bird	Monthly
$3.60	$7.75	$10.00	$7.20	$186.00

1983 - 1987 Parking Inventory Comparisons

Percent Increases in Supply from 1983 to 1987

	Total	Public	Private
1983-87	12.8%	5.14%	26%
1983-87*	19.4%	9.8%	35.8%

Percent Occupancy in 1983 and 1987

	Total		Public		Private	
	10:00 a.m.	noon	10:00 a.m.	noon	10:00 a.m.	noon
1983	83.6%	87.6%	85.8%	90.5%	81.2%	81.6%
1987	86.3%	90.6%	88%	94.5%	83.9%	85.0%

1983 - 1987 Average Rate Comparisons

	1 Hour	8 Hour
1983**	$2.40	$6.10
1987	$3.60	$10.00
% change	51.15%	63.17%

* Includes parking spaces opening in 1988-89
** 1983 rates adjusted to 1987 dollars

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1987 DOWNTOWN BOSTON PARKING INVENTORY

Introduction

In the fall of 1987, the Boston Transportation Department (BTD) began an in-house effort to conduct a parking survey of all downtown parking facilities. This project was initiated to update the 1983 CSI/BTD parking survey and to provide accurate information about the existing parking supply. Significant change in land-use in the downtown area has occurred, implying that there have been changes in the number and use of the parking facilities since the previous parking inventory conducted in 1983. Further, it is clear that parking rates had changed dramatically since the 1983 survey, perhaps influencing the use of parking spaces in terms of long versus short-term parking. This survey is a vital first step in the Department's formulation of a downtown parking policy, providing the technical information base necessary to analyze existing conditions and recent trends in order to develop a comprehensive parking policy.

This survey is also useful as a cross reference to other major study efforts now underway. In the larger context, the Boston Transportation Department is actively engaged in the Central Artery/Third Harbor Tunnel (CA/THT) planning effort. This includes a major effort in the area of projecting vehicle trips to the downtown area. The recent off-street parking supply information as base data is desirable to insure that trips are accurately distributed on the local street network.

This document also has been prepared to provide the general public and interested professionals with the information collected in the parking survey effort. The document contains Section I: Overview of 1987 Survey Methodology; Section II: Summary Analysis of the 1987 Off-Street Parking Information; Section III: Summary Comparison of 1983 and 1987 Parking Inventories; and Section IV: BTD Next Steps.

SECTION I: OVERVIEW OF SURVEY METHODOLOGY

The BTD began its effort by outlining the procedures which would be undertaken first, to determine and format the study area; second, to collect the parking information; third, to develop a workable data base; and fourth, to analyze the information.

1.1 Study Area

It was determined that the survey would be conducted in the Boston Proper area in a manner that was consistent with the boundaries of the Parking Freeze area as the overall public parking supply is reflective of the parking freeze bank. (Figure 1: 1987 BTD Parking Study Area and Parking Zones)

The Parking Freeze was implemented to reduce vehicle miles traveled (VMT) to assist in reducing levels of carbon monoxide and ozone and thereby improve air quality. It is part of the State Implementation Plan (SIP) which outlined measures to be taken throughout Massachusetts in order to reach compliance with National Ambient Air Quality Standards by December 31, 1987. Instituted in 1976, the present freeze on commercial parking spaces (public parking spaces for which a fee is charged) limits the number of public parking spaces in the freeze area to 35,503.

The study area is bounded by Massachusetts Ave., the Charles River, Boston Harbor, the Fort Point Channel and the Southeast Expressway. The area was divided into parking zones which were formulated as aggregates of the CTPS CA/THT zones. This zonal system was chosen so that the parking inventory data would be compatible with the trip generation information being collected and projected for the Central Artery/Third Harbor Tunnel project. This is desirable for many analyses purposes pertaining to, not only the CA/THT project but also to the Department's Access Plan analysis, parking permits, transit usage information, etc.

There were 54 CTPS CA/THT zones within the study area which were aggregated into 17 larger parking zones. These zones attempt to reflect the recognized commercial and neighborhood areas within the study area. The following describes the 17 parking zones:

Zone 1- Includes the Government Center area, Bulfinch Triangle, Faneuil Hall western portion and the State House.

Zone 2- Boston Common, Downtown-Crossing retail core, Chinatown northwest portion, and Fabric District.

Zone 3- Federal St.-Financial District area.

Figure 1

1987 BTD PARKING ZONES AND STUDY AREA

Zone 4- Pearl St.-Financial District, International Place area.

Zone 5- South Station area, Fort Point Channel western portion, New England Medical Center area, Theater District southern portion, Leather District Chinatown southeast portion, S. Postal Annex, Mass Turnpike/S.E. Expressway Interchange

Zone 6- Waterfront southern area, Rowes Wharf area, North End southern portion, Faneuil Hall eastern portion

Zone 7- North End, Waterfront northern portion.

Zone 8- North Station area.

Zone 9- Charles River Park & MGH area.

Zone 10- Beacon Hill.

Zone 11- Boston Public Garden, Park Square, Bay Village, & Theater district.

Zone 12- Back Bay north.

Zone 13- Back Bay south.

Zone 14- Copley Square, South End northern portion.

Zone 15- Prudential Center area, Christian Science Center area, Back Bay south of Boylston Street.

Zone 16- South End eastern portion.

Zone 17- South End east of Mass. Ave, University and Boston City Hospital Medical Areas, Flower Exchange.

A map was developed of the zonal boundaries and all parking facilities in the study area. (Figure 2: 1987 BTD Parking Area and Facility Location) Facilities were identified by utilizing; 1) the 1976 Parking Freeze Inventory, 2) the 1981 BRA Off-street Parking Inventory, 3) the 1983 CSI/BTD Parking Survey, 4) Boston Air Pollution Control Commission (BAPCC) permits and maps, and 5) BTD maps and information. Determination of survey procedures were based on the accuracy of information obtained from these documents. In numerous cases there were inconsistencies in information between the original 1976 Parking Freeze Inventory, 1981 BRA parking inventory map, the 1983 CSI/BTD Inventory, APCC permits, and common knowledge. Efforts to rectify these discrepancies were undertaken as part of this survey. A complete description of these procedures are included in the data entry section of this report.

Publisher's Note: Oversized map included in the original document at this point was not filmed.


1987 BTD Parking Study
Area and Facility Location
Public Parking
Private Parking
April 1988
Figure 2
BOSTON COMMON
PUBLIC GARDENS

1.2 Development of Survey Form

The following parking information was collected for each parking facility within the study area:

Facility Type - defined as private garage, private lot, public garage or public lot.

Facility Capacity -Number of parking spaces available at each facility.

Facility Occupancy - defined as the number of vehicles parked in a facility. These were taken at 10:00 a.m. and 12:00 p.m.

Rates - defined as the amount charged and posted at the facility. Rates were determined for 1 hour, 3 hour, 8 hour, Early Bird, and monthly. Early bird rates are rates which are charged based on entrance and exit times and/or entrance locations, the specifics of which vary by facility.

HOV Spaces - defined as parking spaces specifically reserved for high occupancy vehicles

HOV Clearance - defined as those facilities which have a clearance of greater than 7'2" at the entrance

Handicapped Availability - defined as parking spaces reserved for transportation handicapped users.

In addition, locational information was obtained for each facility including street address, name of facility, BRA map code number, CSI zone number, ward, block, precinct, CTPS zone and BTD parking zone.

1.3 Collection of Information

Due to various levels of information reliability and completeness, as well as time and manpower constraints, different amounts of data collection were made for different facilities. Parking facilities with less than 10 spaces were not included as part of this study. This is procedurally consistent with past inventories. It is assumed that a majority of these spaces are private and/or used for residential purposes.

The survey was conducted between October 20, 1987 and November 19, 1987 and data was collected on Tuesdays, Wednesdays and Thursdays between the hours of 9:30 a.m. and 1:30 p.m. Appendix A contains an example surveyor fieldwork package including a survey form, surveyor instruction sheet, an example field map and a copy of the letter of authorization from the Commissioner of Transportation. Survey teams were given maps of each day's fieldwork with facilities to be surveyed delineated.

Concerns regarding surveyor access to facilities were addressed at the outset by BTD staff who contacted the major operators of public facilities, and, where possible, operators of private facilities. In most cases, public facility operators, private operators and building managers were all cooperative. In a few isolated instances information about private residential facilities was obtained by telephone interview rather than on-site surveying.

Facility Type: For all four categories - private garage, private lot, public garage, and public lot - past information was assumed to be true and surveyors were instructed to verify it for accuracy. In the case of determining private from public facilities, all facilities which were not readily accessible to the general public were classified by the surveyors as private. As there are private facilities which can charge a fee, posted rates were noted and then permits checked to determine private versus public parking spaces.

Facility Capacity - For all public and private garages, lots with greater than 100 spaces, and lots which are not "striped" - listed number of spaces from previous inventories and BAPCC permits were used to determine capacity. Actual space counts were taken at all stripped lots with less than 100 spaces and selected garages or lots where inconsistencies in information existed.

Facility Occupancy- Garages and "striped" lots with greater than 100 spaces were calculated by subtracting the number of vacant spaces from the listed number of spaces to derive the occupied number of spaces. In garages and "striped" lots with less than 100 spaces and unstriped lots, the number of vehicles were counted. The number of vehicles or vacant spaces were counted between 9:30 a.m. and 11:00 a.m. for the 10:00 a.m. occupancy rate and between 11:30 a.m. and 1:00 p.m. for the noon occupancy rate. The occupancy rate calculation was completed as part of the data input process.

Rates - Information on rates were obtained from the posted rates at each facility. Calculations were made by surveyors where necessary. In some cases, follow up phone calls were made to facilities for clarification of information.

HOV Spaces/HOV Clearance/Handicapped Availability - All service information was recorded as posted, or as given by operator/attendant at the facility.

1.4 Data Entry

Surveyed information was checked against BAPCC permit and original 1976 Parking Freeze Inventory information for accuracy. As the parking freeze had an existing bank number in 1976 of 34,131, which reflected the existing supply at that time, checks were made to determine whether or not the number of spaces in razed facilities had been added back into the freeze bank. Also, various information discrepancies existed both in the classification of facility types and facility capacities (which affected the overall numbers in the parking supply). Because the parking freeze caps the public off-street parking supply at 35,503, the breakdown and distinction between the public off-street supply and private off-street supply was critical to the analysis of the information.

All of the data was input into a data base format and developed into various configurations for analyses purposes. All information is comparable to the 1983 CSI/BTD Parking Inventory completed by CSI for the Boston Transportation Department. The 1983 parking information has been reformatted into 1987 BTD parking zones for comparison purposes. The 1987 BTD parking inventory does not include the Ft. Point Channel area of South Boston which is the 1983 Survey's zone 18. These numbers have been subtracted from the 1983 inventory totals in this study for comparison purposes.

SECTION II: SUMMARY ANALYSIS OF OFF-STREET PARKING INFORMATION

Supply Characteristics

2.1 Total Off-Street Parking Supply

The 1987 Off-street Parking Survey indicates that the study area contains approximately 55,660 legal off-street parking spaces. Of this total, 32,843 (59%) spaces are open to the general public and 22,824 (41%) are private spaces. In addition, 1,475 (4.5%) public parking spaces have been allocated from the freeze bank and are due to open in several new parking facilities in 1988. Private spaces to be available in 1988-89 total an additional 1,762 (7.7%) spaces. This will bring the total of off-street parking spaces to 58,904; 34,318 (58.2%) open to the public and 24,586 private (41.7%). (Table 1: 1987 Total Off-street Parking Supply Data Summary, Table 2: Opening 1988-1989 Off-Street Parking Spaces, and Figure 3: Total Off-Street Parking Supply Chart)

Table 1

1987 OFF-STREET PARKING

-DATA SUMMARY-

1987 PARKING SUPPLY DATA SUMMARY

ZONE	# of Facils.	Public Lot Spaces	# of Facils.	Public Garage Spaces	Total Public Spaces	# of Facils.	Private Lot Spaces	# of Facils.	Private Garage Spaces	Total Private Spaces	Total Spaces By Zone
1	6	642	6	3712	4354	9	464	7	1269	1733	6087
2	19	881	5	4735	5616	1	18	2	448	466	6082
3	0	0	5	2591	2591	1	24	5	799	823	3414
4	3	74	3	707	781	4	105	3	529	634	1415
5	6	673	3	1407	2080	12	811	3	229	1040	3120
6	7	412	4	2182	2594	7	379	4	1089	1468	4062
7	3	353	0	0	353	14	940	2	663	1603	1956
8	14	1530	0	0	1530	8	1138	1	239	1377	2907
9	8	620	7	3607	4227	7	455	4	1061	1516	5743
10	1	30	1	90	120	5	100	3	176	276	396
11	9	502	4	2191	2693	6	154	2	157	311	3004
12	0	0	0	0	0	3	64	2	92	156	156
13	3	160	1	500	660	4	65	4	276	341	1001
14	3	189	3	1910	2099	8	236	8	2750	2986	5085
15	0	0	2	2655	2655	0	0	5	1868	1868	4523
16	2	240	0	0	240	31	1590	1	394	1984	2224
17	0	0	1	250	250	24	4242	0	0	4242	4492
Total	84	6306	46	26537	32843	144	10785	56	12039	22824	55667
Opening '88-'89	0	0	5	1475	1475	0	0	8	1762	1762	3237
TOTAL	84	6306	51	28012	34318	144	10785	64	13801	24586	58904

Table 2

NEW OFF-STREET PARKING FACILITIES TO BE OPENED 1988-1989

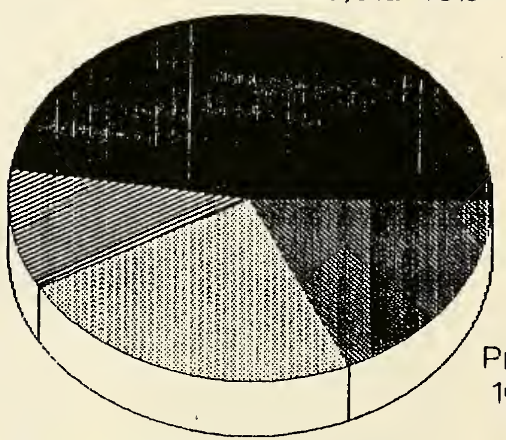
ZONE	Name/Address of Facility	Public Garage Space	Private Garage Space
2	99 Summer St	0	120
3	125 Summer St	0	350
4	21 Custom House St	0	42
4	125 High St.	150	700
6	75 State St	700	0
11	Heritage on the Green	0	175
13	500 Boylston St	625	375
	TOTAL	1475	1762

Source- Boston Air Pollution Control Commission

Figure 3

Total Off-Street Parking Supply

1987 BTD Parking Survey



Public	34,318 (58.2%)
Private	24,586 (41.8%)

Total Supply 58,904

* Incl. all permited spaces under const.

2.2 Public Off-Street Parking Supply

In the total public off-street supply of 34,318 spaces, 26,537 (81%) of the spaces are located in 46 garage structures. The remaining 6,306 spaces (19%) of the public supply are located in 84 lots. Zone 2, the Boston Common - Downtown Crossing area contains the greatest number of public spaces totaling 5,616 (17%) of the public supply. Zone 1, Government Center has the second largest with 4,354 (13.2%) public spaces. Over 25% of the study area's public supply is located in six major garage facilities; Prudential Center garage with 2,154 spaces, Government Center Garage with 1,865 spaces, Boston Common Garage with 1,500 spaces, Lafayette Place Garage with 1,050 spaces, Winthrop Square Garage with 1,125 spaces, and Aquarium/India Row Garage with 1,150 spaces. (See Table 3: Major Public Garage Facilities)

2.3 Private Off-Street Parking Supply

The private off-street supply contains 12,039 (53% of the private supply) spaces in 56 garages and 10,785 (47% of the private supply) spaces in 144 lots. The South End - Flower Exchange (zone 17) has the greatest number of private parking spaces with 4,242 spaces (18%) of the private off-street supply located in 24 facilities. The major private facilities in zone 17 are owned by the B.U. medical center and the Flower Exchange. The Copley Square area (zone 14) contains the second highest number of private spaces with 2,986 (13.1%) spaces located in 8 garages and 8 lots. Approximately 1,800 (60.3%) of these zone 14 private spaces are located in the Hancock and Prudential Towers. A portion of the private spaces are for residential purposes.

Occupancy Characteristics

2.4 Total Off-Street Parking Occupancy

The occupancy rate of the total off-street parking supply is 86.3% at 10:00 a.m. and 90.6% at noon. The Federal St. - Financial District area (zone 3) had a 97.8% occupancy rate at 10:00 a.m. and 100.6% occupancy rate at noon. Pearl St. - Financial District (zone 4) had a 85.4% occupancy rate at 10:00 a.m. and 88.9 % at noon. The South Station area (zone 5) had an occupancy rate of 93.3% at 10:00 a.m. and 94.5 % at noon. The Copley Square area (zone 14) showed very high occupancy rates with 88.9% occupancy rate at 10:00 a.m. and 91.3% occupancy rate at noon. In terms of differences between 10:00 a.m. and 12:00 p.m. observations, Boston Common - Downtown Crossing area (zone 2) showed the greatest increase with 768 additional spaces being occupied at noon. The North End - Waterfront area (zone 6) had an addition of 463 spaces occupied and Government Center area (zone 1) increased in occupancy by 352 spaces. A few of the zones decreased by insignificant amounts. The total increase in occupancy for the entire area was 2,384 spaces. (Table 4: 1987 Total Off-Street Parking Occupancy Data)

Table 3

PUBLIC PARKING FACILITIES WITH GREATER THAN 1000 SPACES

ZONE	Name/Address of Facility	Public Garage
1	Government Center Garage	1865
2	Boston Common Garage	1500
2	Lafayette Place Garage	1050
3	240 Devonshire Street/Winthrop Sq.Pkng.	1125
6	70 E. India Row (Aquarium) -Public	1150
15	Prudential Center	2154
*** Total ***		
		8844

Table 4

1987 TOTAL OFF-STREET PARKING
-OCCUPANCY DATA-

ZONE	TOTAL 1987 SUPPLY	TOTAL 10 AM OCCUPANCY	PERCENT OCCUPIED	TOTAL 12 PM OCCUPANCY	PERCENT OCCUPIED
1	6087	5283	86.80%	5635	92.60%
2	6082	4763	78.30%	5531	90.90%
3	3414	3340	97.80%	3435	*106.00%
4	1415	1208	85.40%	1258	88.90%
5	3120	2911	93.30%	2950	94.50%
6	4062	2922	71.90%	3385	83.30%
7	1956	1621	82.90%	1611	82.40%
8	2907	2657	91.40%	2740	94.20%
9	5743	5388	93.80%	5545	96.50%
10	396	316	79.80%	346	87.40%
11	3004	2587	86.10%	2703	89.90%
12	156	114	73.10%	106	67.90%
13	1001	868	86.70%	948	94.70%
14	5085	4522	88.90%	4641	91.30%
15	4523	3887	85.90%	3884	85.90%
16	2224	1879	84.50%	1878	84.40%
17	4492	3782	84.20%	3836	85.40%
Total	55667	48048	86.30%	50432	90.60%

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permited capacity.

As the survey included all vehicles counted in a facility, in those cases where the number of vehicles parked in a facility exceed the permitted capacity, the overall number results in a percent occupancy in excess of 100%. When the total number of spaces available in a facility at 12 p.m. are considered, a deficit results in some cases, due to the number of vehicles parked being in excess of the total parking capacity for a zone, as in the last column of Table 5.

It should be noted that a standard practice used in assessing parking occupancy is the concept of practical capacity. The practical capacity is defined as the practical limit of utilization of parking spaces at any given time. This takes into account the average time duration of a vehicle at a facility, the turnover rate of vehicles, and the ability to find vacant spaces within facilities that are at peak occupancy. Based on standards developed by the Highway Research Board, practical capacity is typically reached when 85% of an off-street facility is utilized. At 85% occupancy, the off-street facility is considered full.

2.5 Public Off-Street Parking Occupancy

As the information indicates, the vast majority of the spaces are occupied by 10:00 a.m. Of the 32,843 public off-street spaces in the study area, 28,912 (88%) are occupied at 10 a.m. and by noon, 31,039 (94.5 %) of the public spaces are occupied. The average occupancy of all public garages was 87.7% at 10 a.m. and 93.3% at noon. The average occupancy of all public lots in the study area is at 89.5% at 10 a.m. and 99.5% at noon.

At noon, 1,804 public parking spaces are available. Boston Common-Downtown Crossing area (zone 2) has the greatest number of spaces available at noon, 493 spaces. The Prudential Center area (zone 15) has 361 spaces available at noon. Changes in occupancy between the 10:00 a.m. and 12 o'clock observations shows a total increase of 2,127 spaces occupied, which is 6.47% of the public parking supply. The Boston Common-Downtown Crossing area (zone 2) shows the largest increase in the number of spaces occupied between the 10:00 a.m. and noon counts, increasing by 808 spaces or 14.3% of the zone's public parking supply. (Table 5: 1987 Public Off-Street Parking Occupancy Data and Table 6: 1987 Public Parking Occupancy Data by Facility Type)

Table 5

1987 PUBLIC OFF-STREET PARKING
-OCCUPANCY DATA-

ZONE	TOTAL PUBLIC SUPPLY	TOTAL 10 AM	PERCENT OCCUPIED	TOTAL 12 PM	PERCENT OCCUPIED	SPACES AVAIL. @ 12PM
1	4354	3825	87.85%	4176	95.91%	178
2	5616	4315	76.83%	5123	91.22%	493
3	2591	2578	99.50%	2640	*101.89%	-49
4	781	665	85.15%	701	89.76%	80
5	2080	2100	*100.96%	2124	*102.12%	-44
6	2594	1976	76.18%	2360	90.98%	234
7	353	283	80.17%	287	81.30%	66
8	1530	1416	92.55%	1473	96.27%	57
9	4227	3975	94.04%	4107	97.16%	120
10	120	109	90.83%	115	95.83%	5
11	2693	2373	88.12%	2484	92.24%	209
12	0	0	N/A	0	N/A	0
13	660	583	88.33%	653	98.94%	7
14	2099	1975	94.09%	2036	97.00%	63
15	2655	2290	86.25%	2294	86.40%	361
16	240	218	90.83%	233	97.08%	7
17	250	231	92.40%	233	93.20%	17
TOTAL	32843	28912	88.03%	31039	94.51%	1804

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permitted capacity.

N/A= Not Applicable

Table 6

1987 PUBLIC PARKING OCCUPANCY BY FACILITY TYPE (LOTS & GARAGES)

ZONE	LOT SPACES	10 AM OBSERVATION	PERCENT OCCUPIED	12 PM OBSERVATION	PERCENT OCCUPIED	GARAGE SPACES	10 AM OBSERVATION	PERCENT OCCUPIED	12 PM OBSERVATION	PERCENT OCCUPIED
1	642	620	96.6	743	115.7	3712	3205	86.3	3433	92.5
2	881	678	76.9	855	97.0	4735	3637	76.8	4268	90.1
3	0	0	N/A	0	N/A	2591	2578	99.5	2640	*101.9
4	74	58	78.4	67	90.5	707	607	85.8	634	89.7
5	673	645	95.8	666	99.0	1407	1455	103.4	1458	103.6
6	412	350	84.9	421	102.2	2182	1626	74.5	1939	88.9
7	353	283	80.2	287	81.3	0	0	N/A	0	N/A
8	1530	1416	92.5	1473	96.3	0	0	N/A	0	N/A
9	620	652	*105.2	661	106.6	3607	3323	92.1	3446	95.5
10	30	19	63.3	25	83.3	90	90	100.0	90	100.0
11	502	472	94.0	499	99.4	2191	1901	86.8	1985	90.6
12	0	0	N/A	0	N/A	0	0	N/A	0	N/A
13	160	83	51.9	153	95.6	500	500	100.0	500	100.0
14	189	152	80.4	190	100.5	1910	1823	95.4	1846	96.6
15	0	0	0.0	0	0.0	2655	2290	86.2	2294	86.4
16	240	218	90.8	233	97.1	0	0	N/A	0	N/A
17	0	0	N/A	0	N/A	250	231	92.4	233	93.2
TOTAL	6306	5646	89.5	6273	99.5	26537	23266	87.7	24766	93.3

N/A= Not Applicable

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in exess of the permited capacity.

2.6 Private Off-Street Parking Occupancy

The private off-street supply is comprised of 102 facilities. Of the 22,824 spaces, 19,137 (83.8 %) are occupied at 10 a.m. and 19,394 (84.9%) are occupied at noon. The average occupancies of all private garages were 86.6% at 10 a.m. and 87.8% at noon. The average occupancy for private lots equaled 80.8% at 10:00 a.m. and 81.8% at noon. The areas with the highest private occupancy rates were Boston Common-Downtown Crossing area (Zone 2) with 96.1 % at 10:00 a.m. and 87.5 % at noon; (Federal Street-Financial District area (zone 3) with 92.5% at 10:00 a.m. and 96.5% at noon; North Station Area (zone 8) with 90.1% at 10:00 a.m. and 92.0% at noon; and Charles River Park-MGH area (zone 9) with 93.2% at 10:00 a.m. and 94.8% at noon. In private garages, the Financial District and South Station areas showed extremely high occupancies with percentages in the 90-100 % range.

At noon, 3,439 private spaces were available. In terms of changes in occupancy rates between 10:00 a.m. and noon, the total occupancy increase in private spaces was 256 spaces, which is 1.1% of the private parking supply. The largest change between 10:00 a.m. and noon occupancy was small, with 79 spaces in zone 6 representing 5.4% of the private spaces in that zone. The data indicates that there is not a significant amount of variation between most private parking supply occupancy rates between 10:00 a.m. and noon. (Table 7: 1987 Off-Street Private Parking Occupancy Data and Table 8: 1987 Private Parking Occupancy Data by Facility Type)

Parking Rate Characteristics

2.7 Public Parking Rates

Parking rate information was recorded for 1 hour, 3 hour, 8 hour, Early Bird, and monthly rates. The rate information was obtained from rate signs posted at the entrance/exit of a facility or from the attendant on duty. Only public parking rates are included in this survey information. All zonal parking rate averages have been weighted to reflect the capacity of the facilities. Parking rate information is presented in several ways in order to most accurately reflect the variances found within zones. (Table 9: 1987 Average Parking Rates By Zone and Table 10: 1987 Lowest and Highest Public Off-Street Parking Rates by Zone.

Table 7

1987 PRIVATE OFF-STREET PARKING -OCCUPANCY DATA-

ZONE	TOTAL PRIVATE SUPPLY	TOTAL 10 AM	PERCENT OCCUPIED	TOTAL 12 PM	PERCENT OCCUPIED	SPACES AVAIL. @ 12PM
1	1733	1458	84.13%	1459	84.19%	274
2	466	448	96.14%	408	87.55%	58
3	823	762	92.59%	795	96.60%	28
4	634	543	85.65%	557	87.85%	77
5	1040	811	77.98%	826	79.42%	214
6	1468	946	64.44%	1025	69.82%	443
7	1603	1338	83.47%	1324	82.60%	279
8	1377	1241	90.12%	1267	92.01%	110
9	1516	1413	93.21%	1438	94.85%	78
10	276	207	75.00%	231	83.70%	45
11	311	214	68.81%	219	70.42%	92
12	156	114	73.08%	106	67.95%	50
13	341	285	83.58%	295	86.51%	46
14	2986	2547	85.30%	2605	87.24%	381
15	1868	1598	85.55%	1591	85.17%	277
16	1984	1661	83.72%	1645	82.91%	339
17	4242	3551	83.71%	3603	84.94%	639
TOTAL	22824	19137	83.85%	19394	84.97%	3430

Table 8

1987 PRIVATE PARKING OCCUPANCY
BY FACILITY TYPE
(LOTS & GARAGES)

ZONE	LOT SPACES	10 AM OBSERVATION	PERCENT OCCUPIED	12 PM OBSERVATION	PERCENT OCCUPIED	GARAGE SPACES	10 AM OBSERVATION	PERCENT OCCUPIED	12 PM OBSERVATION	PERCENT OCCUPIED
1	464	400	86.2	382	82.3	1269	1058	83.4	1077	84.9
2	18	20	*111.1	22	*122.2	448	428	95.5	386	86.1
3	24	24	100.0	24	100.0	799	738	92.4	771	96.5
4	105	63	60.0	69	65.7	529	480	90.7	488	92.2
5	811	584	72.0	592	73.0	229	227	99.1	234	*102.2
6	379	268	70.7	285	75.2	1089	678	62.2	740	67.9
7	940	691	73.5	671	71.4	663	647	97.6	653	98.5
8	1138	1002	88.0	1028	90.3	239	239	100.0	239	100.0
9	455	380	83.5	409	90.0	1061	1033	97.4	1029	97.0
10	100	79	79.0	86	86.0	176	128	72.7	145	82.4
11	154	107	69.5	107	69.5	157	107	68.1	112	71.3
12	64	53	82.8	49	76.5	92	61	66.3	57	61.9
13	65	44	67.7	53	81.5	276	241	87.3	242	87.7
14	236	180	76.3	195	82.6	2750	2367	86.1	2410	87.6
15	0	0	N/A	0	N/A	1868	1598	85.5	1591	85.2
16	1590	1266	79.6	1249	78.5	394	395	100.2	396	100.5
17	4242	3551	83.7	3603	84.9	0	0	N/A	0	N/A
TOTAL	10785	8712	80.8	8824	81.8	12039	10425	86.6	10570	87.8

N/A= Not Applicable

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permited capacity.

Table 9

1987 AVERAGE PARKING RATES-BY ZONE*

ZONE	1 HR. RATE	3 HR. RATE	8 HR. RATE	EARLYBRD. RATE	MONTHLY RATE
1	$4.83	$10.82	$11.08	$7.50	$275.56
2	$3.05	$ 7.53	$ 8.53	$7.73	$240.00
3	$2.97	$ 7.59	$14.10	$9.00	$214.50
4	$4.90	$13.25	$16.25	N/A	$235.00
5.	$3.73	$10.63	$11.15	N/A	$238.96
6	$4.76	$10.16	$12.64	N/A	$224.95
7	$3.14	$6.58	$6.58	N/A	$ 87.04
8	$3.08	$6.06	$6.14	$5.00	$ 88.22
9.	$3.03	$5.95	$7.60	N/A	$150.00
10	$4.00	$6.00	$12.00	N/A	$195.00
11.	$3.37	$7.96	$ 8.47	$6.81	$170.56
12	N/A	N/A	N/A	N/A	N/A
13	$6.00	$8.08	$10.94	N/A	$175.00
14	$3.44	$7.61	$10.02	N/A	$145.26
15	$2.00	$6.00	$ 8.62	N/A	$160.00
16	$3.71	$5.46	$ 5.46	N/A	N/A
17	$2.00	$4.00	$10.00	N/A	N/A
Average ** Rate	$3.63	$7.73	$ 9.97	$ 7.21	$186.00

* Rates at individual facilities surveyed are weighted by their capacities.

** The Average Rate is the mean of all weighted rates from zones 1-17

N/A - Not Applicable

Table 10

1987 LOWEST AND HIGHEST PUBLIC PARKING RATES -BY ZONE-

ZONE	1 HOUR RATE Low/High	3 HOUR RATE Low/High	8 HOUR RATE Low/High	EARLYBIRD RATE Low/High	MONTHLY RATE Low/High
1	3.00/8.00	9.00/17.00	7.50/17.00	7.50/7.50	225.00/300.00
2	2.00/8.00	6.00/15.00	8.00/18.00	7.00/8.00	240.00/250.00
3	1.55/6.00	3.65/15.00	4.40/24.00	9.00/9.00	210.00/220.00
4	2.50/6.00	9.00/18.00	9.00/20.00	N/A	235.00/235.00
5	2.00/6.00	3.50/13.00	3.50/17.00	N/A	195.00/280.00
6	2.00/7.00	5.00/20.00	5.00/20.00	N/A	150.00/240.00
7	3.00/4.00	4.00/7.00	4.00/7.00	N/A	70.00/140.00
8	2.00/4.00	4.00/10.00	4.00/12.00	5.00/5.00	65.00/110.00
9	2.00/4.00	4.00/8.00	4.00/11.00	N/A	150.00/150.00
10	4.00/4.00	6.00/6.00	12.00/12.00	N/A	195.00/195.00
11	2.00/5.00	4.00/10.00	6.00/12.00	6.00/7.00	120.00/175.00
12	N/A	N/A	N/A	N/A	N/A
13	6.00/6.00	6.00/18.00	9.00/20.00	N/A	175.00/175.00
14	3.00/4.00	7.00/12.00	9.00/14.00	N/A	140.00/150.00
15	2.00/2.00	6.00/6.00	7.00/9.00	N/A	160.00/160.00
16	3.00/4.00	4.00/9.00	4.00/9.00	N/A	N/A
17	2.00/2.00	4.00/4.00	10.00/10.00	N/A	N/A

N/A - Not Applicable

The total zonal average parking rate for one hour was $3.60. The rates for one hour ranged from $2.00 in the Prudential Center area (zone 15) to $6.00 in adjacent Back Bay south (zone 13). The average three hour rate for all zones was $7.75. These 3 hour rates range from the low of $3.65 in the Federal St. - Financial District (zone 3) to the high of $18.00 in the Pearl St. - Financial District and the Federal St. - Financial District (zones 4 and 13). The average 8 hour rate for all zones was $10.00. These rates range from a low of $3.50 in the South Station area (zone 5) to a high of $24.00 in the Federal St. - Financial District (zone 3).

The average Early Bird rate for all zones was $7.20. These rates range from a low of $5.00 in the North Station area (zone 8) to a high of $9.00 in the Federal St. - Financial District (zone 3). Most zones did not have facilities offering Early Bird rates, in fact, only 8 facilities offered Early Bird rates in the study area.

Monthly rates were recorded at 29 public facilities and 13 private facilities. The average weighted monthly rate at the 29 public parking facilities was $186.00. These facilities charged rates ranging from $65.00 in the North Station area (zone 8) to $300.00 in the Government Center area (zone 1). It should be noted that 219 Washington Street Garage which represents the highest monthly rate charge of $300.00 was included in the Government Center area (zone 1) but in addition clearly serves the Downtown Crossing area (zone 2). (Table 11: 1987 Selected Monthly Rates)

Table 11

SELECTED FACILITIES CHARGING MONTHLY RATES

ZONE	Name/Address of Facility	Monthly Rate
1	219-237 Washington Street	300.00
2	Lafayette Place Garage	240.00
3	100 Federal Street	250.00
4	International Place	235.00
5	84-96 Beach Street	280.00
6	10-30 Rowes Wharf - Public	240.00
7	280-292 Commercial St.	140.00
8	131 Beverly Street	65.00
11	Motor Mart Garages	175.00
13	Danker & Donahue Garage	175.00
14	John Hancock Garage	140.00
15	Prudential Center	160.00

SECTION III: SUMMARY COMPARISON OF 1983 and 1987 PARKING INVENTORIES

Supply Comparison

3.1 1983-1987 Total Parking Supply Comparison

Since 1983, the number of off-street parking spaces has increased by 6,322 spaces (a 12.8% increase) from 49,345 spaces in 1983 to 55,667 spaces in 1987. The addition of 3,237 permitted public and private spaces, due to open in 1988-89, boosts the total 1987 off-street parking supply to 58,904 - a 19.4% increase from the 1983 supply. All of the below numbers include the additional spaces due to open in 1988-89.

The largest increase in supply occurs in the Copley Square area (zone 14), with a 66.2 % increase from 3,059 spaces to 5,085 spaces which largely reflects changes in the parking supply at Copley Place and Tent City. Several other areas have increases over 25% including the Boston Common - Downtown Crossing area (zone 2), Waterfront-Faneuil Hall area (zone 6), Public Garden - Park Square area (zone 11) and the Prudential Center - Back Bay south (zone 15). A portion of the parking supply increase is due to residential parking. The Government Center area (zone 1) and Back Bay north (zone 13) show under 2% increases in total parking supply growth. (Table 12: 1983-1987 Total Off-Street Parking Supply Comparison; Figure 4: Bar Graph Comparison of 1983 - 1987 Total Off-Street Parking Supply and Appendix 2 - Table A: 1983 Total Off-Street Parking Supply Data)

3.2 1983 - 1987 Public Supply Comparison

The 1987 parking inventory indicates an existing public parking supply of 32,843 spaces of which 26,537 are in garages and 6,306 are in public lots. Compared to the 1983 public parking supply figure of 31,236, this represents a 5.14% increase. Again it should be noted that an additional 1,475 public spaces have been permitted by the APCC and will be available in 1988. This will bring the total public parking supply up to 34,318 for a total change in public parking supply between 83'-87 of 3,082 spaces (9.87%). (Table 13: 1983 - 1987 Public Supply Changes and Figure 5: Bar Graph Comparison of 1983 - 1987 Public Off-Street Parking Supply)

There has been a significant change in the location of public parking spaces since 1983. The Downtown Crossing-Boston Common area (zone 2) had the largest increase since 1983 with an addition of 977 spaces (21.1%). Copley Square area (zone 14) increased by 662 spaces (46.1%); Charles River Park - MGH area (zone 9) increased by 583 spaces (16%); and, Government Center area (zone 1) increased by 527 spaces (13.8%). The Pearl St. - Financial District area (zone 4)

Table 12

1983-1987 TOTAL OFF-STREET PARKING -SUPPLY COMPARISON-

ZONE	'83 TOTAL PARKING SUPPLY	'87 TOTAL PARKING SUPPLY	'83-'87 PERCENT CHANGE	SPACES OPENING '88-'89*	'83-'87 SUPPLY CHANGE**	'83-'87 PERCENT CHANGE**
1	6025	6087	1.03%		62	1.03%
2	4793	6082	26.89%	120	1409	29.40%
3	3003	3414	13.69%	350	761	25.34%
4	2026	1415	-30.16%	892	281	13.87%
5	2843	3120	9.74%		277	9.74%
6	3819	4062	6.36%	700	943	24.69%
7	1728	1956	13.19%		228	13.19%
8	2699	2907	7.71%		208	7.71%
9	5320	5743	7.95%		423	7.95%
10	341	396	16.13%		55	16.13%
11	2526	3004	18.92%	175	653	25.85%
12	153	156	1.96%		3	1.96%
13	1648	1001	-39.26%	1000	353	21.42%
14	3059	5085	66.23%		2026	66.23%
15	3483	4523	29.86%		1040	29.86%
16	1904	2224	16.81%		320	16.81%
17	3975	4492	13.01%		517	13.01%
Total	49345	55667	12.81%		9559	19.37%
Opening '88-'89	0	3237	N/A	3237		N/A
TOTAL	49345	58904	19.37%	3237	9659	19.37%

*- See table 2: (Facils. Opening '88-'89)

**-Includes New Facility Openings

N/A= Not Applicable

Figure 4

1983-1987 TOTAL OFF-STREET PARKING
-SUPPLY COMPARISON-

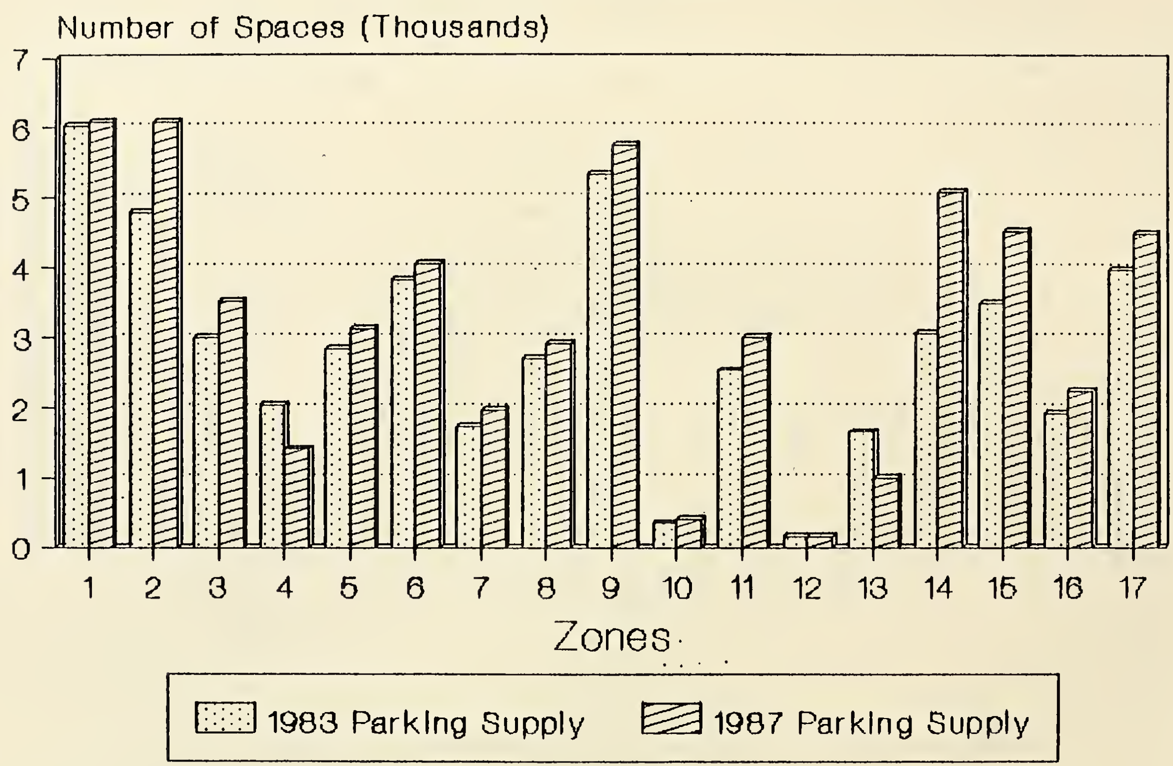


Table 13

1983-1987 PUBLIC OFF-STREET PARKING -SUPPLY COMARISON-

ZONE	1983 PUBLIC SUPPLY	1987 PUBLIC SUPPLY	'83-'87 PERCENT CHANGE	SPACES OPENING '88-'89*	83'-87' SUPPLY CHANGE**	'83-'87 PERCENT CHANGE**
1	3827	4354	13.77%		527	13.77%
2	4639	5616	21.06%		977	21.06%
3	2283	2591	13.49%		308	13.49%
4	1596	781	-51.07%	150	-665	-41.67%
5	2151	2080	-3.30%		-71	-3.30%
6	2937	2594	-11.68%	700	357	12.16%
7	342	353	3.22%		11	3.22%
8	1186	1530	29.01%		344	29.01%
9	3644	4227	16.00%		583	16.00%
10	205	120	-41.46%		-85	-41.46%
11	2347	2693	14.74%		346	14.74%
12	0	0	N/A		0	N/A
13	1271	660	-48.07%	625	14	1.10%
14	1437	2099	46.07%		662	46.07%
15	2568	2655	3.39%		87	3.39%
16	553	240	-56.60%		-313	-56.60%
17	250	250	0.00%		0	N/A
TOTAL	31236	32843	5.14%		3082	9.87%
Opening '88-'89	0	1475	N/A	1475		N/A
TOTAL	31236	34318	9.87%	1475	3082	9.87%

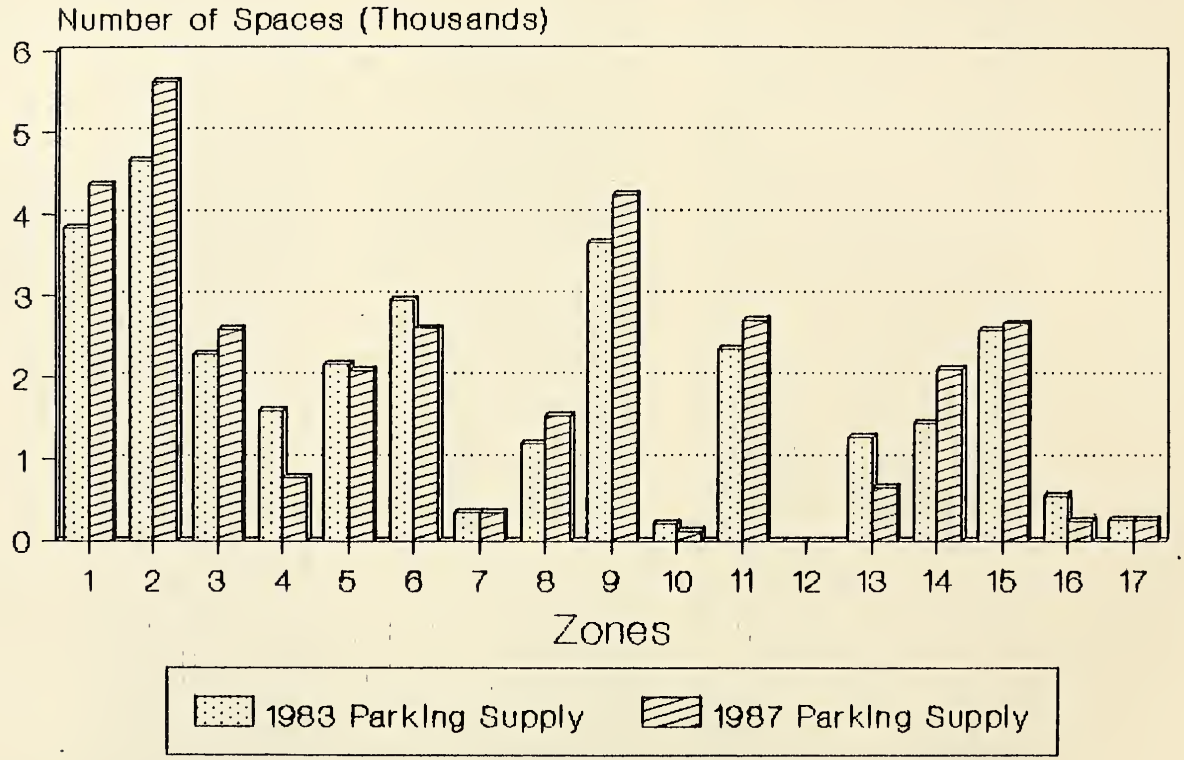
*— See Table 2: (Facils. Opening '88-'89)

**—Includes New Facility Openings

N/A= Not Applicable

Figure 5

1983-1987 PUBLIC OFF-STREET PARKING
-SUPPLY COMPARISON-



had a decrease of 665 spaces (-41.7%) and the South End (zone 16) showed a decrease of 313 spaces (-56.6 %). In addition, a large percentage decrease (-41.5) occurred in the Beacon Hill area with a decrease of 85 spaces out of a total zonal public parking supply of 205 spaces. In 1983 the City of Boston owned seven garages and four lots with a total of 6,773 spaces or 20% of the public parking supply. Today, the City of Boston owns three garages (2910 spaces) and 18 lots (1,534 spaces) for a total 4,444 spaces which is 14% of the existing public spaces. (Table 14: 1987 City of Boston Owned Parking Facilities)

3.3 1983 - 1987 Private Parking Supply Comparison

For the private parking supply, the total number of spaces in 1983 equaled 18,109. The 1987 Inventory shows a shift in this number with a total supply of 22,824 in existence and with an additional 1,762 given APCC exemptions. The total supply will increase to 24,586 spaces within 1988-89. This is a 35.8% increase in the private parking supply in the past five years and represents 6,477 parking spaces. (Table 15: 1983-1987 Private Off-Street Parking Supply Comparison and Figure 6: Bar Graph Comparison of 1983 - 1987 Private Off-Street Parking Supply)

Several parking zones experienced significant growth in the supply of private parking. The Copley Square area (zone 14) had the greatest increase in private spaces totalling 1,364 which is an 84.1% increase in that zone's private parking supply. The second largest increase was in the Prudential Center area (zone 15) with 953 spaces representing a 105% increase in the zone's private parking supply. A portion of the private parking supply increase is residential. In the Pearl St. - Financial District (zone 4) and Boston Common - Downtown Crossing area (zone 2) the percentage increase in private parking was considerable with 946 spaces being added to Zone 4 (a 220% increase) and 432 spaces being added to Zone 2 (a 281% increase). Zone 4 reflects both a large numerical and percentage increase. Government Center (zone 1) had a decrease in private parking of 465 spaces which decreased the private parking supply in that zone by 21.2%.

Table 14

1987 CITY OF BOSTON OWNED PARKING FACILITIES

CITY OWNED GARAGES

FACILITY	CAPACITY
Winthrop Square Garage	1125 spaces
Lafayette Place Garage	1050 spaces
Kingston/Bedford Garage	735 spaces
	2910 - TOTAL spaces

CITY OWNED LOTS

FACILITY	CAPACITY
147 Causeway Street	122 spaces
45 Nashua/36 Accolon Way	360 spaces
Purchase and High Sts.	70 spaces
Sullivan Square/600 Main	151 spaces
North Washington Street	61 spaces
Blackstone Street at North and Cross Sts.	206 spaces
Essex/Lincoln Sts.	78 spaces
Haverhill Street at Causeway	49 spaces
Haverhill Street at Traverse Street	45 spaces
Martha Road	81 spaces
Beverly Street/Causeway	15 spaces
Beverly Street - Rear	50 spaces

Table 14 (cont.)

CITY OWNED LOTS (cont.)

FACILITY	CAPACITY
Hayward Place	50 spaces
Dewey Square	Temporary Bus Terminal
Stillman Street at Endicott	19 spaces
* Stillman/North Washington/Chardon Sts.	65 spaces
North Washington Street - Cooper and Stillman Place	10 spaces
690 - 700 Harrison Ave.	102 spaces
	1534 - TOTAL spaces

* Comprised of two adjacent lots: Lot 1 = 50 spaces
Lot 2 = 15 spaces

Source- Boston Real Property Department

Table 15

1983–1987 PRIVATE OFF–STREET PARKING –SUPPLY COMPARISON–

ZONE	1983 PRIVATE SUPPLY	1987 PRIVATE SUPPLY	'83–'87 PERCENT CHANGE	SPACES OPENING '88–'89*	83'–87' SUPPLY CHANGE**	'83–'87 PERCENT CHANGE**
1	2198	1733	-21.16%		-465	-21.16%
2	154	466	202.60%	120	432	280.52%
3	720	823	14.31%	350	453	62.92%
4	430	634	47.44%	742	946	220.00%
5	692	1040	50.29%		348	50.29%
6	882	1468	66.44%		586	66.44%
7	1386	1603	15.66%		217	15.66%
8	1513	1377	-8.99%		-136	-8.99%
9	1676	1516	-9.55%		-160	-9.55%
10	136	276	102.94%		140	102.94%
11	179	311	73.74%	175	307	171.51%
12	153	156	1.96%		3	1.96%
13	377	341	-9.55%	375	339	89.92%
14	1622	2986	84.09%		1364	84.09%
15	915	1868	104.15%		953	104.15%
16	1351	1984	46.85%		633	46.85%
17	3725	4242	13.88%		517	13.88%
Total	18109	22824	26.04%		6477	35.77%
Opening '88–'89	0	1762	N/A	1762		N/A
TOTAL	18109	24586	35.77%	1762	6477	35.77%

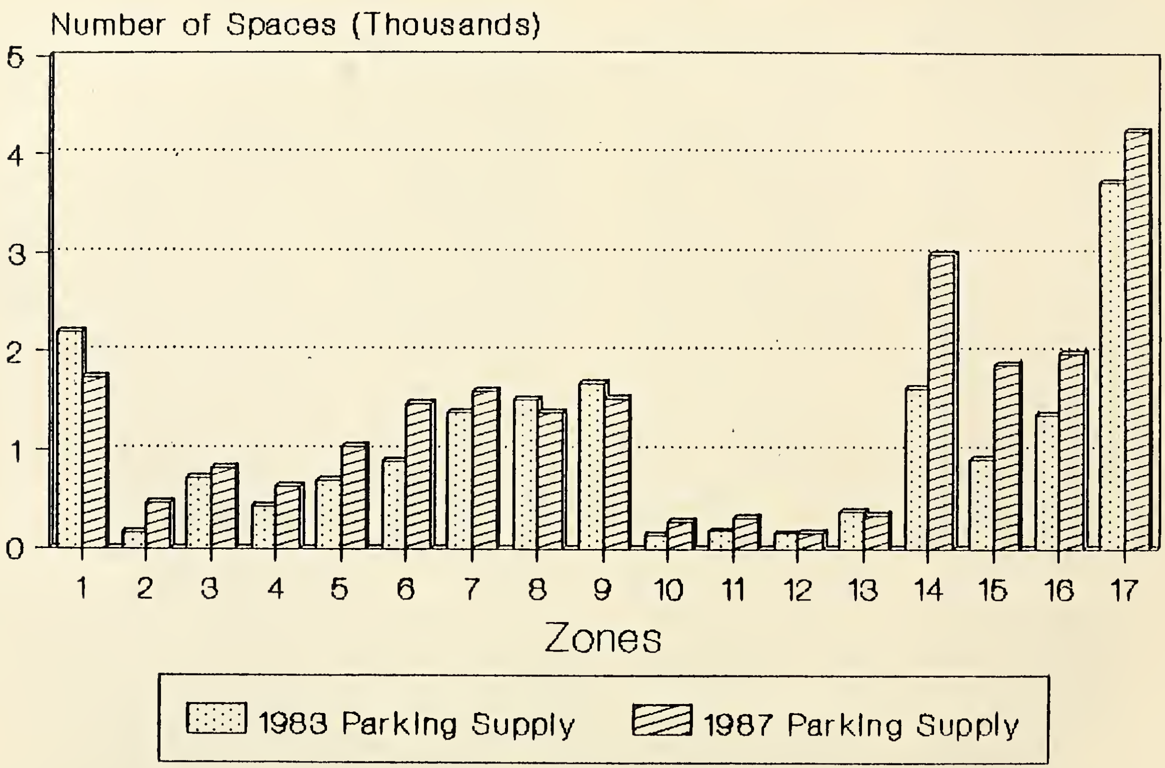
*– See table 2: (Facils. Opening '88–'89)

**–Includes New Facility Openings

N/A– Not Applicable

Figure 6

1983-1987 PRIVATE OFF-STREET PARKING
-SUPPLY COMPARISON-



Occupancy Comparison

3.4 1983 -1987 Total Off-Street Parking Occupancy Comparison

In 1983, the total parking supply occupancy rate was 83.6% at 10:00 a.m. and 87.6% at noon. This compares to the 1987 total parking supply occupancy rate of 86.3% at 10:00 a.m. and 90.6% at noon. Total parking spaces available at noon decreased from 6,086 in 1983 to 5,235 in 1987. On a zonal basis, the Federal St.- Financial District area (zone 3) showed a significant increase in the 10:00 a.m. occupancy rate from 87.7% in 1983 to 97.8% in 1987. In addition, the zone 3 noon occupancy rates increased from 95% to 106%. The Back Bay south area (zone 13) had large increases in occupancy rates from 57% to 87% at 10:00 a.m. and from 64% to 95% at noon. In the Prudential Center area (zone 15) there has been a decrease in occupancy rates from 93% to 86% at 10:00 a.m. and from 93% to 86% at noon. The North Station area (zone 8) decreased from 93% to 91% at 10:00 a.m. and 104% to 94% at noon. (Table 4: 1987 Total Off-Street Parking Occupancy Data, Table 16: Total Off-Street Parking Comparison of Occupancy Rates 1983 - 1987, and Appendix 2 - Table B: 1983 Total Off-Street Parking Occupancy Data)

3.5 1983 - 1987 Public Off-Street Parking Occupancy Comparison

In terms of the public parking supply, in 1983 85.8% of the parking supply was occupied at 10:00 a.m. and 90.5% at noon. This compares to 88% at 10:00 a.m. and 94.5% at noon in 1987. Public parking spaces available at noon in 1983 totalled 2,956 spaces and in 1987 totalled 1,804 spaces. (Table 5: 1987 Public Off-Street Parking Occupancy Data, Table 17: Public Off-Street Parking comparison of Occupancy Rates 1983 - 1987, and Appendix 2 - Table C: 1983 Public Off-Street Parking Occupancy Data)

Changes in occupancy rates from 1983 to 1987 indicate some major areas of increase. The Downtown Crossing-Boston Common area (zone 2) showed an increase in percent occupancy at noon from 83% in 1983 to 91% in 1987. The North Station Area (zone 8) had an increase in noon occupancy in 1983 of 88% to 96% in 1987. Back Bay south had a noon 1983 occupancy rate of 66% increasing to 99% in 1987 and South End-Flower Exchange area (zone 17) increased from 68% in 1983 to 93% in 1987. The Copley area (zone 14) increased from 85% in 1983 to 97% in 1987.

Table 16

TOTAL OFF-STREET PARKING COMPARISON OF OCCUPANCY RATES 1983-87

ZONE	% CHANGE IN SUPPLY FROM 83-'87	1983 10 AM % OCCUPANCY	1987 10 AM % OCCUPANCY	1983 12 PM % OCCUPANCY	1987 12 PM % OCCUPANCY
1	1.03%	88.99%	86.80%	96.30%	92.60%
2	26.89%	80.03%	78.30%	89.99%	90.90%
3	13.69%	87.70%	97.80%	95.30%	* 106.00%
4	-30.16%	83.50%	85.40%	88.20%	88.90%
5	9.74%	95.50%	93.30%	96.20%	94.50%
6	6.36%	75.70%	71.90%	85.80%	83.30%
7	13.19%	71.60%	82.90%	68.40%	82.40%
8	7.71%	93.00%	91.40%	* 103.60%	94.20%
9	7.95%	86.90%	93.80%	88.60%	96.50%
10	16.13%	85.30%	79.80%	82.70%	87.40%
11	18.92%	83.60%	86.10%	86.40%	89.90%
12	1.96%	77.10%	73.10%	71.20%	67.90%
13	-39.26%	57.40%	86.70%	64.20%	94.70%
14	66.23%	84.40%	88.90%	86.00%	91.30%
15	29.86%	93.30%	85.90%	92.50%	85.90%
16	16.81%	72.50%	84.50%	72.60%	84.40%
17	13.01%	87.40%	84.20%	84.10%	85.40%
AVERAGE	12.81%	83.60%	86.30%	87.60%	90.60%

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permited capacity.

Table 17

PUBLIC OFF-STREET PARKING
COMPARISON OF OCCUPANCY RATES
1983-87

ZONE	% CHANGE IN SUPPLY FROM 83-'87	1983 10 AM % OCCUPANCY	1987 10 AM % OCCUPANCY	1983 12 PM % OCCUPANCY	1987 12 PM % OCCUPANCY
1	13.77%	85.65%	87.85%	96.92%	95.91%
2	21.06%	79.99%	76.83%	89.90%	91.22%
3	13.49%	89.09%	99.50%	97.24%	* 101.89%
4	-51.07%	86.28%	85.15%	91.42%	89.76%
5	-3.30%	98.00%	* 100.96%	* 100.19%	* 102.12%
6	-11.68%	76.13%	76.18%	88.46%	90.98%
7	3.22%	89.77%	80.17%	90.35%	81.30%
8	29.01%	* 106.16%	92.55%	88.45%	96.27%
9	16.00%	93.47%	94.04%	94.62%	97.16%
10	-41.46%	92.68%	90.83%	90.73%	95.83%
11	14.74%	84.24%	88.12%	87.09%	92.24%
12	N/A	N/A	N/A	N/A	N/A
13	-48.07%	60.82%	88.33%	66.09%	98.94%
14	46.07%	83.30%	94.09%	84.48%	97.00%
15	3.39%	97.86%	86.25%	96.88%	86.40%
16	-56.60%	97.47%	90.83%	96.75%	97.08%
17	0.00%	67.20%	92.40%	68.40%	93.20%
AVERAGE	5.14%	85.76%	88.03%	90.54%	94.51%

N/A= Not Applicable

* Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permited capacity.

3.6 1983 - 1987 Private Off-Street Parking Occupancy Comparison

In 1983, 81% of the private parking supply was occupied at 10:00 a.m. (3,414 spaces available) and 81.6% was occupied at noon (3,341 spaces available). In 1987, 83.8% of the private supply is occupied at 10:00 a.m. (3,687 spaces available) and 84.9% occupied at noon (3,430 spaces). (Table 7: 1987 Private Off-Street Parking Occupancy Data, Table 18: Private Off-Street Parking Comparison of Occupancy Rates 1983 - 1987, and Appendix 2 - Table D: 1983 Private Off-Street Parking Occupancy Data)

In comparing the 1983 occupancy rates with the 1987 occupancy rates for the private parking supply on a zonal basis there are many cases where there have been large increases. Both of the Financial Districts (zone 3 and 4) had increases in occupancy rates at 10:00 am., zone 3 increasing to 93% from 83% and zone 4 increasing to 85% from 73%. The Public Garden-Park Square area (zone 11) showed a decrease in the occupancy rate from 76% at 10:00 a.m. and 77% at noon in 1983 to 69% at 10:00 a.m. and 70% at noon in 1987. The North Station area (zone 8) had a decrease from 98% at 10:00 a.m. and 102% at noon in 1983 to 90% at 10:00 a.m. and 92% at noon in 1987.

3.7 1983 - 1987 Public Parking Rate Comparison

In 1983 the average 1 hour rate was $2.05 which expressed in 1987 dollars is $2.40. The difference between the inflated 1983 one hour rate ($2.40) and the 1987 one hour rate ($3.60) is $1.20 or a 51% increase. The 1983 average 8 hour rate was $5.20 which expressed in 1987 dollars is $6.10. The difference between the inflated 1983 eight hour rate of $6.10 and the average eight hour 1987 rate of $10.00 is $5.85 or a 63.17% increase. Using the actual 1983 rates unadjusted, results in a 77.35% increase in the one hour rate and 91.41% in the eight hour rate. [Table: 9: 1987 Average Parking Rates by Zone, Table 19: 1983 Parking Rates Converted to 1987 Dollars and Table 20: Rate Change 1983 - 1987 By Zone (1983 Rates Adjusted to 1987 Dollars) and Table 21: Rate Change 1983 - 1987 By Zone (1983 Rates Unadjusted)].

Table 18

PRIVATE OFF-STREET PARKING
COMPARISON OF OCCUPANCY RATES
1983-87

ZONE	% CHANGE IN SUPPLY FROM 83-'87	1983 10 AM % OCCUPANCY	1987 10 AM % OCCUPANCY	1983 12 PM % OCCUPANCY	1987 12 PM % OCCUPANCY
1	-21.16%	94.59%	84.13%	95.27%	84.19%
2	202.60%	100.00%	96.14%	100.00%	87.55%
3	14.31%	83.19%	92.59%	89.31%	96.60%
4	47.44%	73.26%	85.65%	76.28%	87.85%
5	50.29%	87.72%	77.98%	84.10%	79.42%
6	66.44%	74.38%	64.44%	76.87%	69.82%
7	15.66%	67.10%	83.47%	63.06%	82.60%
8	-8.99%	96.70%	90.12%	101.65%	92.01%
9	-9.55%	72.73%	93.21%	75.72%	94.85%
10	102.94%	74.26%	75.00%	70.59%	83.70%
11	73.74%	75.98%	68.81%	77.09%	70.42%
12	1.96%	77.12%	73.08%	71.24%	67.95%
13	-9.55%	45.89%	83.58%	58.09%	86.51%
14	84.09%	85.45%	85.30%	87.36%	87.24%
15	104.15%	80.44%	85.55%	80.11%	85.17%
16	46.85%	62.25%	83.72%	62.77%	82.91%
17	13.88%	88.78%	83.71%	85.18%	84.94%
AVERAGE	26.03%	81.15%	83.85%	81.55%	84.97%

Table 19

1983 PARKING RATES CONVERTED TO 1987 DOLLARS *

ZONE	1 HOUR RATE		8 HOUR RATE	
	1983 Rate	1987 * DOLLARS	1983 RATE	1987 * DOLLARS
1	$2.70	$3.17	$7.08	$8.31
2	$2.06	$2.42	$5.23	$6.14
3	$1.80	$2.11	$4.39	$5.15
4	$2.35	$2.76	$7.01	$8.23
5	$1.80	$2.11	$4.46	$5.23
6	$2.58	$3.03	$6.54	$7.68
7	$1.69	$1.98	$5.35	$6.28
8	$1.72	$2.02	$3.30	$3.87
9	$1.46	$1.71	$5.52	$6.43
10	$2.00	$2.35	$5.00	$5.87
11	$3.24	$3.80	$4.42	$5.19
12	N/A	N/A	N/A	N/A
13	$3.00	$3.52	$6.50	$7.63
14	$1.96	$2.30	$4.86	$5.70
15	$1.60	$1.88	$6.21	$7.29
16	$1.00	$1.17	$2.50	$2.93
17	$1.75	$2.05	$5.00	$5.87
AVERAGE	$2.04	$2.40	$5.21	$6.11

* 1987 Dollar figures are based on an inflation rate of 17.4%
SOURCE: Consumer Price Index (C.P.I.) for Boston

N/A - Not Applicable

Table 20

-RATE CHANGE 1983-1987 BY ZONE-

(1983 Rates Adjusted to 1987 Dollars)

ZONE	'83 1HR RATE*	'87 1HR RATES	PERCENT CHANGE '83-'87	'83 8HR RATE*	'87 8HR RATE	PERCENT CHANGE '83-'87
1	$3.17	$4.83	52.37%	$8.31	$11.08	33.33%
2	$2.42	$3.05	26.03%	$6.14	$8.53	38.93%
3	$2.11	$2.97	40.76%	$5.15	$14.10	173.79%
4	$2.76	$4.90	77.54%	$8.23	$16.25	97.45%
5	$2.11	$3.73	76.78%	$5.23	$11.15	113.19%
6	$3.03	$4.76	57.10%	$7.68	$12.64	64.58%
7	$1.98	$3.14	58.59%	$6.28	$6.58	4.78%
8	$2.02	$3.08	52.48%	$3.87	$6.14	58.66%
9	$1.71	$3.03	77.19%	$6.43	$7.60	18.20%
10	$2.35	$4.00	70.21%	$5.87	$12.00	104.43%
11	$3.80	$3.37	-11.32%	$5.19	$8.47	63.20%
12	$0.00	$0.00	0.00%	$0.00	$0.00	0.00%
13	$3.52	$6.00	70.45%	$7.63	$10.94	43.38%
14	$2.30	$3.44	49.57%	$5.70	$10.02	75.79%
15	$1.88	$2.00	6.38%	$7.29	$8.62	18.24%
16	$1.17	$3.71	217.09%	$2.93	$5.46	86.35%
17	$2.05	$2.00	-2.44%	$5.87	$10.00	70.36%
AVERAGE	$2.40	$3.63	51.15%	$6.11	$9.97	63.17%

*-Adjusted to 1987 dollars with inflation factor

Table 21

-RATE CHANGE 1983-1987 BY ZONE-

(1983 Rates Unadjusted)

ZONE	'83 1HR RATE	'87 1HR RATES	PERCENT CHANGE '83-'87	'83 8HR RATE	'87 8HR RATE	PERCENT CHANGE '83-'87
1	$2.70	$4.83	78.89%	$7.08	$11.08	56.50%
2	$2.06	$3.05	48.06%	$5.23	$8.53	63.10%
3	$1.80	$2.97	65.00%	$4.39	$14.10	221.18%
4	$2.35	$4.90	108.51%	$7.01	$16.25	131.81%
5	$1.80	$3.73	107.22%	$4.46	$11.15	150.00%
6	$2.58	$4.76	84.50%	$6.54	$12.64	93.27%
7	$1.69	$3.14	85.80%	$5.35	$6.58	22.99%
8	$1.72	$3.08	79.07%	$3.30	$6.14	86.06%
9	$1.46	$3.03	107.53%	$5.52	$7.60	37.68%
10	$2.00	$4.00	100.00%	$5.00	$12.00	140.00%
11	$3.24	$3.37	4.01%	$4.42	$8.47	91.63%
12	N/A	N/A	N/A	N/A	N/A	N/A
13	$3.00	$6.00	100.00%	$6.50	$10.94	68.31%
14	$1.96	$3.44	75.51%	$4.86	$10.02	106.17%
15	$1.60	$2.00	25.00%	$6.21	$8.62	38.81%
16	$1.00	$3.71	271.00%	$2.50	$5.46	118.40%
17	$1.75	$2.00	14.29%	$5.00	$10.00	100.00%
AVERAGE	$2.04	$3.63	77.35%	$5.21	$9.97	91.41%

-The 1983 rates are the actual rates charged in 1983, not the adjusted 1987 dollar amount.

N/A= Not Applicable

Nine of the sixteen zones which have public parking rates had increases in their one hour rates over 50% between 1983 and 1987. The South End (zone 16) had the largest percent increase of 217% between '83 and '87. The Boston Public Garden-Park Square area had the greatest percent decrease in rates of 11%. In the eight hour rate comparison, three zones had rate increases in excess of 100%. These are the Federal St.-Financial District area (zone 3) with a 174% increase, South Station Area (zone 5) with a 113% increase and Beacon Hill area (zone 10) with 104% increase. The smallest increase in 8 hour rates occurred in the North End-Waterfront area (zone 7) with a 4.8% increase. The 1983 CSI/BTD parking inventory survey did not collect the 3Hr, Early Bird or monthly rate information so no comparison is available for these data groups.

Section IV: BTD Next Steps

The BTD efforts to survey the downtown off-street parking facilities has produced a great amount of data that needs further analysis and evaluation. The survey affords the Department the opportunity to develop a comprehensive parking policy based on parking supply information delineated by usage, location, and occupancy rates. Information pertaining to parking rates in the downtown area offers insight into the elasticity of the parking demand and the significant variability of rates charged. The information generated by the survey will be analyzed more fully, comparing changes in supply, occupancy and rates within zones, contiguous zones, and overall for the study area.

Additionally, information regarding the Ft. Point Channel area's parking supply will be included in the next phase of this analysis. The survey provides a base level of data which can be manipulated into different zonal configurations for various purposes. Additional information pertaining to the turnover rates at various types of facilities needs to be complied.

As part of this survey, a great deal of effort was spent, in cooperation with the Environment Department, to update the parking freeze bank. Measures to develop ongoing procedures to maintain an adequate accounting of the freeze bank spaces and parking supply inventory will be undertaken.

The BTD will analyze the parking survey information in terms of related land-use and transportation access changes. Further, attempts to relate the parking inventory information data to trip generation forecasts and CA/THT parking replacement issues will be undertaken. Parking policy initiatives will be analyzed using the parking survey information.

APPENDIX I: Example Survey Package

Boston

Raymond L. Flynn, Mayor

October 16, 1987

To Whom It May Concern:

The Boston Transportation Department is conducting a survey of all parking facilities in the Downtown area. This survey effort is focused on gathering information pertaining to the parking supply, demand and costs. The survey team will need to visit your facility 2-3 times in one day to collect the information for this important study. I request that you grant access to the surveyors bearing this letter.

Your cooperation in allowing the City's survey team to conduct this data collection activity at your facility will be greatly appreciated and an asset to the completeness of the study. The information collected will be utilized in the City's development of a comprehensive parking policy.

If you have any questions regarding this survey please contact Susan Sloan-Rossiter, Parking Project Manager at 725-3076. Thank you for your cooperation.

Sincerely,

Richard A. Dimino
Commissioner

0028j/SSR

Richard A. Dimino, Commissioner, Transportation Department
City of Boston/City Hall Square/Boston, MA 02201

* IF ANY PROBLEMS COME UP CALL 725-4680...DAN OR SUSAN SLOAN *

INSTRUCTIONS FOR CITYWIDE PARKING SURVEY

This survey will be conducted to update the city's present data base on the existing parking supply within the "Boston Proper" area. It is expected that this information will allow the city to formulate more realistic and enforceable parking policy.

There are two (2) parts to the survey. The first part of the survey will be conducted as indicated below. The second part of the survey, obtainment of occupancy information, will be conducted in conjunction with part one on a seperate survey form (instructions attached)

The fields of information in the first part of the survey should be answered in the following manner:

1) Space Count: The Listed Number of Spaces (from previous permits/inventorys) will be filled out in the office by the survey supervisor. Actual Number of Spaces will be counted at facilities when noted with an asteric or the like on the survey sheet. This count must be as accurate as possible...thus please take the time to count all marked (lined) spaces. If the sittuation arises that a facility that has been noted for space count does not have the spaces "lined" please write "NA".

2) The Schedule information should be obtained from a posting (sign) at the site/facility OR by asking the attendant on duty.

3) Daily rates: This information will be obtained from the posting of rates at the facility. ONLY fill out the rates as delineated on the survey. If further rate breakdown or lack of breakdown exists, please conduct the necessary calculations to find the applicable rate on the survey sheet. If some information is not posted, such as 8th hour, monthly rate, etc. try to get the information from the attendant on duty. If you can not get the information, write NA in the space provided. If you are given a phone number to contact for the information, please note the number on the survey form for future reference/follow-up.

4) Service information: This information may be difficult to obtain, BUT it is important....First look for postings to see if the facility advertises these services, then if necessary ask the attendant on duty. These spaces should be designated/reserved for their respective purposes.

HOV stands for High Occupancy Vehicle (van/car pool)

HP stands for handicap parking.

Clearance means the maximum height allowed for vehicles entering the facility. The minimum height for van accessibility is 7'11". If clearance is above this height, circle "Y"; if below 7'11", circle "N".

9826T DJLB

BOSTON PROPER PARKING FIELD SURVEY

Map Code # 1

CTPS zone 7 - 1
BRA code# 60

Date ________
Surveyor ________

Address New Chardon St.
Owner ________

For Office use: Inven/P. # ________

Type: GAR. X LOT ____
Open ____ Reserved X (Check Applicable)
Self ____ Valet ____

1) SPACE COUNT
Listed # of Spaces ________
Actual # of Spaces ________ (Only When Noted)

2) SCHEDULE

	M-F	SAT	SUN
Days of Operation			
Hours of Operation			

3) DAILY RATES

1st Hour $ ____.____

2nd Hour $ ____.____

3rd Hour $ ____.____

8th Hour $ ____.____

Early Bird Rate $ ____.____

Maximim Daily Charge $ ____.____

Monthly Rate $ ____.____ Y - N

Weekend Sat. $ ______ per hr. Hrs. ____ to ____

Sun. $ ______ per hr. Hrs. ____ to ____

4) SERVICE INFORMATION

HOV Y - N # spaces ______

HP Y - N # spaces ______

Overnight Space for residents Y - N # spaces ______
Rate ______
Hours ______

Van Accessable Y - N ("Y" if height grtr. than 7'11")

DJLB/SSR
9771T

OCCUPANCY SURVEY INSTRUCTION SHEET

This, the second part of the Boston proper parking survey will obtain information on the occupancy rates of parking facilities in the city. This part of the survey will be atatched to part one of the survey, and will also be pre-prepared in the office.

In order to conduct this part of the survey you will have to visit all facilities at two different times and some pre-selected facilities three times during the day The survey times for the two time periods are at 10am and 12noon. The third time frame that will surveyed at selected facilities will be at 2pm.

The information we are trying to obtain are the occupancies of the facilities at different peak times of the day. In actuality, we will begin the occupancy counts at 9:30am and continue until aproximately 11am.; and conduct the 12noon count from 11:30am to 1pm. It is anticipated that a surveyor will be able to visit and collect information at <u>three facilities</u> during each time period. Thus, three facilities will be surveyed between 9:30am and 11am, and three facilities will be surveyed between 11:30am and 1pm.

In order to find the occupancy rate of a facility, you will have to count the number of vacant spaces in/at the facility. This will allow us to easily calculate the number of cars at the facility by subtracting this number from the total number of cars the facility is rated to hold. If the facility is full you should count the number of "illegal" cars parked if there are in fact any. You may find that there are both vacant spaces and some illegaly parked vehicles... in this case record both of these catigories in there appropriate spaces on the survey form. As well, in the event the facility is "FULL" note it as such on the survey form at the given time.

9833T DJLB

BOSTON PROPER PARKING FIELD SURVEY

MAP CODE # ______

CTPS zone ________ Date __________

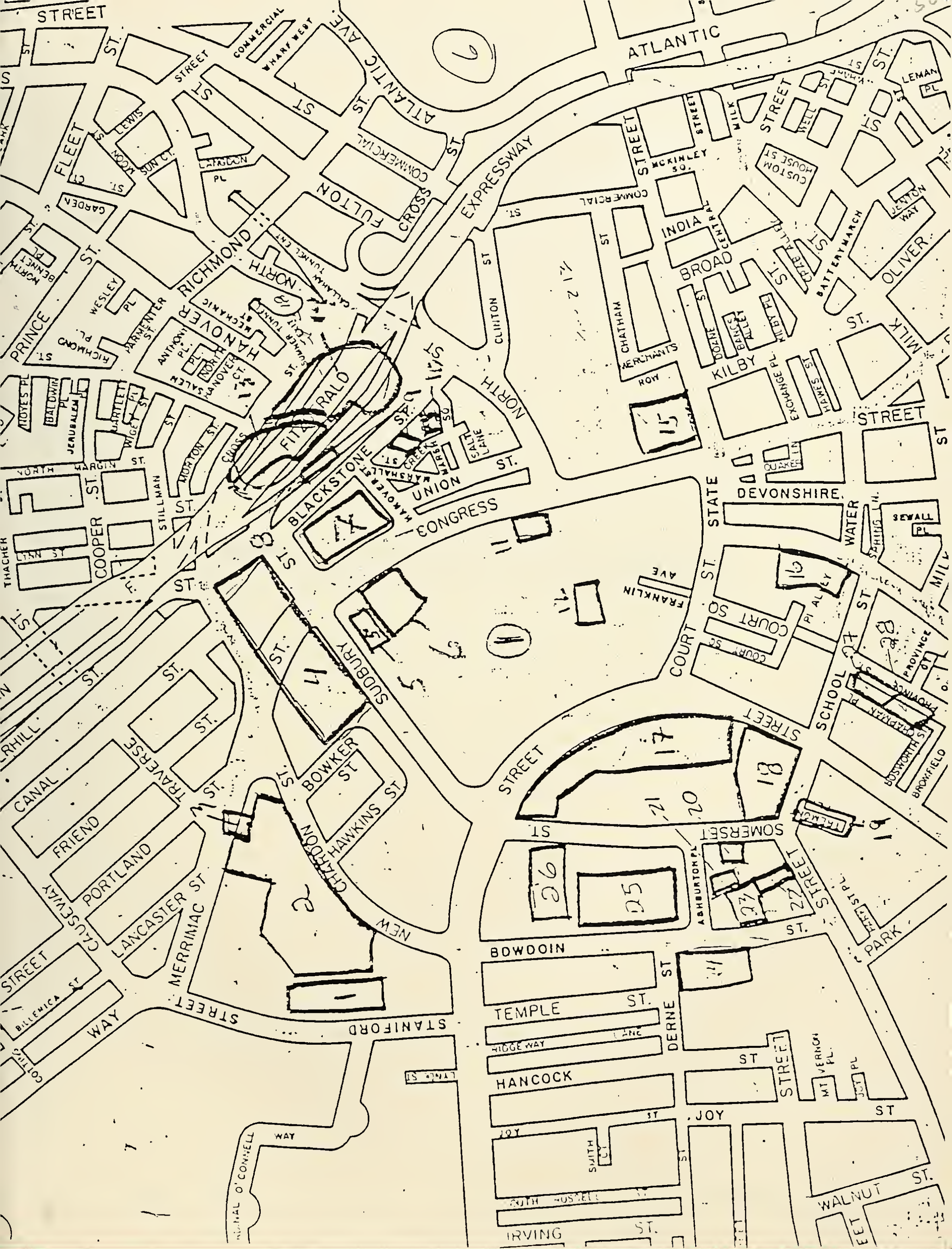
BRA code# ________ Surveyor __________

Address ____________________

Owner ____________________

	OCCUPANCY Garages/Striped Lots				Unstriped Lots
	# Vacant Spaces		# Illegal Spaces		# of Vehicles
10-11 am	__________	...	__________	......	__________
noon-1 pm	__________	...	__________	......	__________
If starred ( ) 2-3 pm	__________	...	__________	......	__________

9714T
DJLB/SSR



STREET
ATLANTIC
ATLANTIC AVE
COMMERCIAL WHARF WEST
COMMERCIAL ST
FULTON ST
CROSS ST
EXPRESSWAY
FLEET ST
LEWIS ST
MOON ST
SUN CT.
LANGDON PL
GARDEN CT ST.
NORTH BENNETT PL
PRINCE ST.
WESLEY PL
RICHMOND ST.
NORTH ST
CALLAHAN TUNNEL ENT
MECHANIC ST
SUMNER TUNNEL EXIT
PARMENTER ST.
HANOVER ST
ANTHONY PL.
NORTH HANOVER CT.
SALEM ST
FITZGERALD
NOYES PL
BALDWIN PL
JERUSALEM
BARTLETT PL
WIGET ST
MORTON ST.
CROSS ST.
NORTH MARGIN ST.
STILLMAN ST.
COOPER ST.
THACHER
LYNN ST
BLACKSTONE
HANOVER ST
MARSHALL ST
CREEK
MARSH
SALT LANE
UNION ST.
CONGRESS
CLINTON ST
NORTH ST
COMMERCIAL ST
CHATHAM
MERCHANTS ROW
McKINLEY SQ.
INDIA ST
BROAD ST.
CENTRAL
STATE
KILBY ST.
DOANE ST
BANCS ALLEY
KILBY PL
EXCHANGE PL.
HAWES ST
STREET
QUAKER LN
DEVONSHIRE
WATER
SPRING LN.
SEWALL PL
MILK ST.
MILK
OLIVER ST.
BATTERYMARCH
CUSTOM HOUSE ST
WELLS
LEMAN PL
DENTON WAY
FRANKLIN AVE
COURT SQ
COURT ST
PI ALLEY
PROVINCE ST
SCHOOL ST
CHAPMAN PL.
BOSWORTH ST
BROMFIELD
SUDBURY ST
NEW ST.
CANAL
HAVERHILL ST.
TRAVERSE ST.
FRIEND
PORTLAND
LANCASTER ST
MERRIMAC ST
CAUSEWAY STREET
BILLERICA ST
WAY
STREET
STANIFORD
BOWKER ST
HAWKINS ST
CHARDON ST
NEW
STREET
SOMERSET ST
ASHBURTON PL.
STREET
BOWDOIN ST
TEMPLE ST.
RIDGE WAY LANE
DERNE ST
HANCOCK ST
LYNDE ST
STREET
MT VERNON PL.
JOY PL
PARK
JOY ST
JOY
SMITH CT.
SOUTH RUSSELL
WALNUT ST.
IRVING ST.
O'CONNELL WAY
6
12
14
15
16
17
18
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APPENDIX II: 1983 CSI/BTD Parking Inventory Information Aggregated by 1987 BTD Parking Zones

Appendix II
TABLE A

1983 TOTAL OFF-STREET PARKING -SUPPLY DATA-

ZONE	PUBLIC LOT SPACES	PUBLIC GARAGE SPACES	TOTAL PUBLIC SPACES	PRIVATE LOT SPACES	PRIVATE GARAGE SPACES	TOTAL PRIVATE SPACES	TOTAL ALL SPACES
1	342	3485	3827	791	1407	2198	6025
2	654	3635	4639	29	125	154	4793
3	98	2185	2283	24	696	720	3003
4	380	1216	1596	112	318	430	2026
5	864	1287	2151	386	306	692	2843
6	790	2147	2937	342	540	882	3819
7	342	0	342	741	645	1386	1728
8	1186	0	1186	1513	0	1513	2699
9	568	3076	3644	379	1297	1676	5320
10	30	175	205	70	66	136	341
11	547	1800	2347	179	0	179	2526
12	0	0	0	61	92	153	153
13	146	1125	1271	117	260	377	1648
14	388	1049	1437	154	1468	1622	3059
15	0	2568	2568	0	915	915	3483
16	159	394	553	1351	0	1351	1904
17	0	250	250	3725	0	3725	3975
TOTAL	6494	24392	31236	9974	8135	18109	49345

Source- 1983 CSI/BTD Parking Inventory Study

Appendix II

TABLE B

1983 TOTAL OFF-STREET PARKING
-OCCUPANCY DATA-

ZONE	TOTAL ALL SPACES	10 AM OBSERVATION	PERCENT OCCUPIED	12 PM OBSERVATION	PERCENT OCCUPIED
1	6025	5357	88.99%	5803	96.30%
2	4793	*3456	72.10%	*3884	81.00%
3	3003	2633	87.70%	2863	95.30%
4	2026	1692	83.50%	1787	88.20%
5	2843	2715	95.50%	2737	96.20%
6	3819	2892	75.70%	3276	85.80%
7	1728	1237	71.60%	1183	68.40%
8	2699	2512	93.00%	2797	**103.60%
9	5320	4625	86.90%	4717	88.60%
10	341	291	85.30%	282	82.70%
11	2526	2113	83.60%	2182	86.40%
12	153	118	77.10%	109	71.20%
13	1648	946	57.40%	1059	64.20%
14	3059	2584	84.40%	2632	86.00%
15	3483	3250	93.30%	3221	92.50%
16	1904	1380	72.50%	1383	72.60%
17	3975	3475	87.40%	3344	84.10%
TOTAL	49345	41276	83.60%	43259	87.60%

Source-1983 CSI/BTD Parking Inventory Study

* Zone 2 1983 Occupancy Data is Incomplete.

** Occupancies greater than 100% & deficits in space availability are due to the parking of vehicles in excess of the permited capacity.

Appendix II
TABLE C

1983 PUBLIC OFF-STREET PARKING
-OCCUPANCY DATA-

ZONE	TOTAL PUBLIC SUPPLY	TOTAL 10 AM	PERCENT OCCUPIED	TOTAL 12 PM	PERCENT OCCUPIED	SPACES AVAIL. @ 12PM
1	3827	3278	85.65%	3709	96.92%	118
2	4639	* 3427	73.87%	* 3855	83.10%	784
3	2283	2034	89.09%	2220	97.24%	63
4	1596	1377	86.28%	1459	91.42%	137
5	2151	2108	98.00%	2155	100.19%	-4
6	2937	2236	76.13%	2598	88.46%	339
7	342	307	89.77%	309	90.35%	33
8	1186	1259	106.16%	1049	88.45%	137
9	3644	3406	93.47%	3448	94.62%	196
10	205	190	92.68%	186	90.73%	19
11	2347	1977	84.24%	2044	87.09%	303
12	0	0	0.00%	0	0.00%	0
13	1271	773	60.82%	840	66.09%	431
14	1437	1197	83.30%	1214	84.48%	223
15	2568	2513	97.86%	2488	96.88%	80
16	553	539	97.47%	535	96.75%	18
17	250	168	67.20%	171	68.40%	79
TOTAL	31236	26789	85.76%	28280	90.54%	2956

* Zone 2 1983 Occupancy Data is Incomplete.

Source-1983 CSI/BTD Parking Inventory Study

Appendix II
TABLE D

1983 TOTAL PRIVATE OFF-STREET PARKING -OCCUPANCY DATA-

ZONE	TOTAL PRIVATE SUPPLY	TOTAL 10 AM	PERCENT OCCUPIED	TOTAL 12 PM	PERCENT OCCUPIED	SPACES AVAIL. @ 12 PM
1	2198	2079	94.59%	2094	95.27%	104
2	154	* 29	* 18.83%	* 29	* 18.83%	125
3	720	599	83.19%	643	89.31%	77
4	430	315	73.26%	328	76.28%	102
5	692	607	87.72%	582	84.10%	110
6	882	656	74.38%	678	76.87%	204
7	1386	930	67.10%	874	63.06%	512
8	1513	1463	96.70%	1538	101.65%	-25
9	1676	1219	72.73%	1269	75.72%	407
10	136	101	74.26%	96	70.59%	40
11	179	136	75.98%	138	77.09%	41
12	153	118	77.12%	109	71.24%	44
13	377	173	45.89%	219	58.09%	158
14	1622	1386	85.45%	1417	87.36%	205
15	915	736	80.44%	733	80.11%	182
16	1351	841	62.25%	848	62.77%	503
17	3725	3307	88.78%	3173	85.18%	552
TOTAL	18109	14695	81.15%	14768	81.55%	3341

* Zone 2 1983 Occupancy Data is Incomplete.

Source-1983 CSI/BTD Parking Inventory Study

ACKNOWLEDGEMENT

The Boston Transportation Department would like to acknowledge the important contributions of several individuals and agencies. A thanks is due to Denise Breiteneicher, Executive Director of the Air Pollution Control Commission, and members of the City of Boston Parking Team, including Owen Donnelly of the BRA, Peter Scarpignato of the DPW, Jim Robbins of the Real Property Department and Deborah Eliason of the Boston Transportation Department. In addition, a special thanks is extended to Cambridge Systematics Associates, Inc. for their generous assistance throughout the survey; in particular, Lance Newmann, Francis Harrison, Earl Ruiter, and Larry Fabian. Further, we would like to thank Tom Lisco of the Central Transportation Planning Staff.

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